

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A camera module comprising a holder provided with a light-conducting channel, within which channel a lens having an optical axis is present, a solid-state image sensor being present near an end of said light-conducting channel, which image sensor comprises an image pick-up section oriented perpendicularly to the optical axis, characterized in that aligning means forming part of the holder are present near the end of the light-conducting channel, which aligning means align the image pick-up section with respect to the optical axis, wherein the image pick-up section extends in a plane parallel to a main surface of the solid-state image sensor, the solid-state image sensor comprising lateral surfaces oriented at least substantially

perpendicularly to the main surface, and the holder comprising an outer wall which is at least substantially polygonal near the end, seen in sectional view in a direction perpendicular to the optical axis, the aligning means comprising bulges present on the outer wall, near the corners of said polygon, the bulges extending beyond the end of the light-conducting channel, having an inner side which abuts against at least one of the lateral surfaces of the solid-state image sensor, the solid-state image sensor being within the holder substantially without play in a direction perpendicular to the optical axis, wherein each of the bulges have an end that jointly form a bonding area which is oriented at least substantially perpendicularly to the optical axis, wherein the holder near the end of the light-conducting channel includes recesses so that the main surface of the solid-state image sensor does not make contact with the holder at the recesses, the solid-state image sensor contacting the holder only at inner sides and top surfaces of the bulges, the top surfaces being perpendicular to the inner sides which abut against the lateral surfaces of the solid-state image sensor.

Claim 2 (Canceled)

3. (Original) A camera module as claimed in claim 2, characterized in that said polygon is a rectangle.

4. (Previously Presented) A camera module according to claim 2, characterized in that the inner side of the bulges comprises an L-shaped recess, as a result of which each bulge abuts substantially without play against two mutually adjacent lateral surfaces of the solid-state image sensor.

5. (Currently Amended) A camera module as claimed in claim 4, characterized in that the L-shaped recesses furthermore each comprise comprises a surface extending parallel to a plane perpendicularly to the optical axis, which surfaces jointly form an abutting surface against which the main surface of the solid-state image sensor abuts substantially without play, thereby determining the distance from the image pick-up section to the lens.

Claims 6-7 (Canceled)

8. (Original) A camera module as claimed in claim 7, characterized in that the camera module comprises a substrate, in which the solid-state image sensor is provided with a second main surface bonded to the substrate, in which the substrate is bonded to the bonding area formed by the ends of the bulges by means of an adhesive material.

9. (Original) A camera module as claimed in claim 2, characterized in that the main surface of the solid-state image sensor and the polygon are at least substantially identical in shape, with the polygon having a smaller surface area, as a result of which a part of the main surface located near the lateral surfaces lies further away from the optical axis than, near the end of the light-conducting channel, the outer wall of the holder.

10. (Currently Amended) A holder for use in a camera module,

which holder is provided with a light-conducting channel, which is arranged for accommodating a lens having an optical axis and which is furthermore arranged for placing a solid-state image sensor comprising an image pick-up section near an end of the light-conducting channel, characterized in that aligning means forming part of the holder are present near said end of the light-conducting channel for aligning the image pick-up section with respect to the optical axis, wherein the image pick-up section extends in a plane parallel to a main surface of the solid-state image sensor, the solid-state image sensor comprising lateral surfaces oriented at least substantially perpendicularly to the main surface, and the holder comprising an outer wall which is at least substantially polygonal near the end, seen in sectional view in a direction perpendicular to the optical axis, the aligning means comprising bulges present on the outer wall, near the corners of said polygon, bulges extending beyond the end of the light-conducting channel, having an inner side which abuts against at least one of the lateral surfaces of the solid-state image sensor, the solid-state image sensor being within the holder substantially

without play in a direction perpendicular to the optical axis, wherein each of the bulges have an end that jointly form a bonding area which is oriented at least substantially perpendicularly to the optical axis, wherein the holder near the end of the light-conducting channel includes recesses so that the main surface of the solid-state image sensor does not make contact with the holder at the recesses, the solid-state image sensor contacting the holder only at inner sides and top surfaces of the bulges, the top surfaces being perpendicular to the inner sides which abut against the lateral surfaces of the solid-state image sensor.

11. (Currently Amended) A camera system comprising a camera module with a holder provided with a light-conducting channel in which a lens having an optical axis is present, in which a solid-state image sensor provided with an image pick-up section oriented perpendicularly to the optical axis is present near an end of the light-conducting channel, and in which aligning means forming part of the holder are present near said end of the light-conducting channel for aligning the image pick-up section with respect to the

optical axis, characterized in that the image pick-up section extends in a plane parallel to a main surface of the solid-state image sensor, the solid-state image sensor comprising lateral surfaces oriented at least substantially perpendicularly to the main surface, and the holder comprising an outer wall which is at least substantially polygonal near the end, seen in sectional view in a direction perpendicular to the optical axis, in which the aligning means comprise bulges present on the outer wall, near the corners of said polygon, which bulges extend beyond the end of the light-conducting channel, having an inner side which abuts against at least one of the lateral surfaces of the solid-state image sensor, as a result of which the solid-state image sensor is contained within the holder substantially without play in a direction perpendicular to the optical axis, wherein each of the bulges have an end that jointly form a bonding area which is oriented at least substantially perpendicularly to the optical axis, wherein the holder near the end of the light-conducting channel includes recesses so that the main surface of the solid-state image sensor does not make contact with the holder at the

recesses, the solid-state image sensor contacting the holder only at inner sides and top surfaces of the bulges, the top surfaces being perpendicular to the inner sides which abut against the lateral surfaces of the solid-state image sensor.

12. (Currently Amended) A method of manufacturing a camera module comprising a holder provided with a light-conducting channel, characterized in that the holder is provided with aligning means, in which a solid-state image sensor being present near an end of the light-conducting channel comes into contact with the aligning means upon placement of the solid-state image sensor in said holder, as a result of which an image pick-up section present on the solid-state image sensor is aligned with respect to an optical axis, wherein the image pick-up section extends in a plane parallel to a main surface of the solid-state image sensor, the solid-state image sensor comprising lateral surfaces oriented at least substantially perpendicularly to the main surface, and the holder comprising an outer wall which is at least substantially polygonal near the end, seen in sectional view in a direction

perpendicular to the optical axis, the aligning means comprising bulges present on the outer wall, near the corners of said polygon, the bulges extending beyond the end of the light-conducting channel, having an inner side which abuts against at least one of the lateral surfaces of the solid-state image sensor, the solid-state image sensor being within the holder substantially without play in a direction perpendicular to the optical axis, wherein each of the bulges have an end that jointly form a bonding area which is oriented at least substantially perpendicularly to the optical axis, wherein the holder near the end of the light-conducting channel includes recesses so that the main surface of the solid-state image sensor does not make contact with the holder at the recesses, the solid-state image sensor contacting the holder only at inner sides and top surfaces of the bulges, the top surfaces being perpendicular to the inner sides which abut against the lateral surfaces of the solid-state image sensor.

13. (New) A camera module comprising:  
a lens;

a sensor; and

a holder configured to hold the lens at a first end and contact the sensor at a second end, wherein the second end includes bulges at corners that extend beyond the sensor, the bulges having side surfaces and top surfaces perpendicular to the side surfaces; the second end further including recesses between the top surfaces so that the sensor does not make contact with the holder at the recesses, the sensor contacting the holder only at the side surfaces and the top surfaces.

14. (New) The camera module of claim 13, wherein the holder comprises a light channel between the lens and the sensor, a diameter of the light channel decreasing from the lens to the sensor.